Patent claims

1. A method to assemble a leadframe strip assembly comprising the following steps:
   - providing a metal foil (12),
   - attaching a carrier tape (13) to the metal foil (12),
   - forming a plurality of leadframes (3) in the metal foil (12), each leadframe (3) comprising a die pad (4) laterally surrounded by a plurality of contact leads (5).

2. A method to assemble a leadframe strip assembly according to claim 1
characterized in that
the plurality of leadframes (3) are formed by an etching process.

3. A method to assemble a leadframe strip assembly according to claim 1 or claim 2
characterized in that
the etching process is performed from one side of the metal foil (12) forming a plurality of isolated leadframes (3).

4. A leadframe strip assembly comprising:
   - a carrier tape (13) including a metal foil (12) attached thereon,
   - a plurality of leadframes (3) formed in the metal foil (12) each leadframe (3) comprising a die pad (4) laterally surrounded by a plurality of contact leads (5) in the metal foil (12).

5. A leadframe strip assembly according to claim 4

characterized in that
the die pad (4) and contact leads (5) of each leadframe (3) of the metal foil (12) are spatially isolated from each other.

6. A leadframe strip assembly according to claim 4 or claim 5 characterized in that
each leadframe (3) of the metal foil (12) is spatially isolated from its neighbour.

7. A leadframe strip assembly according to one of claims 4 to 6
characterized in that
the carrier tape (13) comprises a polyimide film with a silicone adhesive coating (17) and the metal foil (12) comprises OFHC Cu.

8. A leadframe strip assembly according to one of claims 4 to 7
characterized in that
the metal foil comprises a thickness of approximately 1mm to approximately 0.01mm or approximately 0.25mm to approximately 0.1mm.

9. A leadframe strip assembly according to one of claims 4 to 8
characterized in that
the leadframe strip assembly further comprises a plurality of semiconductor die (2), each including an active surface with a plurality of die contact pads (7) and a passive surface, attached to the die attach pads (4) and electrically connected to the leadframe (3) by a plurality of

bond wires (9) connecting the die contact pads (7) and the lead contact areas (6) of the contact leads (5).

10. A panel (14) comprising a section of the leadframe strip assembly according to claim 9
characterized in that
the plurality of dies (2), contact leads (5), wire bonds (9) and upper surface of the carrier tape (13) are encapsulated with mold material (10).

11. A method to assemble a non-leaded semiconductor package (1) comprising the following steps:
- providing a panel according to claim 10,
- removing the carrier tape (13), and
- singulating the non-leaded semiconductor packages (1).

12. A non-leaded semiconductor package (1) comprising:
- a leadframe (3) comprising a die attach pad (4) approximately in its lateral centre, laterally surrounded by a plurality of contact leads (5) each having a contact area (6),
- semiconductor die (2) including an active surface with a plurality of die contact pads (7) and a passive surface, attached to the die attach pad (4) electrically connected to the leadframe (3) by a plurality of bond wires (9) connecting the die contact pads (7) and the lead contact areas (6) of the contact leads (5),
- the upper surface of the die (2), contact leads (5), bond wires (9) and space between the die pad (4) and contact leads (5) being encapsulated with mold material (10),

- the bottom surface (11) of the non-leaded package (1) comprising mold material (10) and the bottom surface of the die attach pad (4) and contact leads (5) on an essentially common plane.

13. A non-leaded semiconductor package (1) according to claim 12
characterized in that
the leadframe (3) comprises a thickness of approximately 1mm to approximately 0.01mm or approximately 0.25mm to approximately 0.1mm.